

reaches its maximum about ten minutes after the administration of the bean, and remains so from ten to twenty minutes. After three-quarters of an hour the normal state of refraction is very nearly re-established. It is therefore a true spasm of accommodation, and in this respect Calabar bean is the direct antagonist of atropia. There are other disturbances of optic sensibility, such as macropy, but the ophthalmoscope does not show any disturbances in the circulation of blood in the retina. The effect of the bean upon the ciliary muscle is quite independent from that upon the iris, as in a patient who is deprived of the iris, but is able to see, the effect became just as apparent as in others. The drug acts by penetrating into the anterior camera, and has therefore an isolated action upon the eye, just as atropia; it excites directly the motor nerve-fibres which animate the ciliary muscle and the sphincter pupillæ. In birds, on which atropia has no action, Calabar bean is likewise nearly ineffectual; the same may be said of fishes and amphibia. The only drug which possesses some analogy to the bean is opium.

Dr. Von Graefe also made experiments with Calabar bean after having first administered a solution of atropia. If the dose of the latter has been strong, the effect of the former may be entirely counteracted. But if some time has elapsed after the use of atropia, or if the dose given was weak, the pupil is moderately contracted, and there is a considerable increase of the state of refraction. Atropia acts far longer upon the apparatus of accommodation than Calabar bean; and it may therefore happen that after the effect of the latter has passed off, that of the former may again become apparent. In mydriasis the bean has the same effect as in healthy eyes; and even in glaucoma this may be observed, unless the iris should have already become quite atrophied. In fistula of the anterior camera the effect is far less marked, but not entirely counterbalanced.—*Med. Times and Gazette*, Aug. 22, 1863.

## MIDWIFERY.

39. *Artificial Induction of Premature Labour*.—Prof. MARTIN's cases forming the subject of a paper in *Monat. f. Geb.* (Jan. and Feb. 1862), were twenty-two in number. In three instances the operation was performed twice in the same individual. Five women were primiparæ, the rest multiparæ. Contraction of some part of the parturient canal was present in twenty cases, in nineteen of which the pelvis was the part contracted. In all these labour cases the antero-posterior diameter was shortened, and in several of them the oblique diameters also. With reference to the indications for the induction of artificial premature labour, the author considers that general pelvic contraction, whether with or without accompanying contraction of one diameter specially, certainly indicates its necessity; but in cases when the contraction is limited to one diameter, unless the degree of the same be very considerable, it is advisable to wait the result of the first labour. It has been found that in some cases, where the antero-posterior diameter has not exceeded  $2\frac{1}{2}$ ", the result has been successful for mother and child when matters have taken their own course. This may be explained by—1, the smallness of the children and the soft condition of the bones of the first children of rachitic mothers; 2, the powerful nature of the labour-pains in the first labours of such women; 3, by the fact that the oblique diameters being often greatly increased in such cases, room is thereby given for the head to pass through, with its shortest diameter opposed to the part of the pelvis, when the contraction is greatest. On the other hand, in the subsequent labours of rachitic women with such moderate degrees of pelvic narrowing;—1, the size of the fœtus appears to increase in successive pregnancies; 2, the configuration of the lower part of the uterus is less regular and favourable for the long progress of the labour, in consequence of the pressure it has undergone in former labours between the head of the child and the pelvic bones, and hence the position of the fœtus is not so good; 3, the pains are less regular in sub-

sequent pregnancies. It is difficult to say what precise measurements of the pelvis indicate, or not, the operation. Much depends on the form of the pelvic inlet, whether the projection forwards be in the middle line or not, and on the manner in which the head presents at the inlet. Indications for the operation are also conditions threatening the life of the mother—uterine hemorrhage, placenta prævia, &c. Two instances coming under this head are given, in which there was excessive distension of the uterus with fluid (hydramnios), œdematous swelling without albuminuria, loss of appetite, and insomnia, and in which the operation was had recourse to. A third series of indications have been laid down by various authors, viz., the habitual death of the fœtus in the last months of pregnancy. The only condition with which the author is familiar at present under such circumstances is a dropsical state of the fœtus, with evident affection of the blood-corpuscles, and these have been constantly observed in cases where there is constitutional syphilis in the parents. The proper treatment in such cases is an anti-syphilitic one, and not induction of premature labour.

The period of pregnancy at which the operation was undertaken was as follows: In two cases at the thirtieth week; in one case of extreme pelvic deformity at the thirty-second week; in one case at the same period, when there was a firm, unyielding tumour of the sacrum. Four of these children lived. In five cases labour was induced at the thirty-fourth week, and three of the children lived. In ten cases at the thirty-fifth week; two of the children were still-born, the others lived. The presentations were—in the seventeen cases, cephalic; in four the feet presented; in three cases, position transverse; in two cases there was prolapsus of funis.

The method employed was to select the simplest at first, and this failing to induce uterine action, to have recourse to other more powerful measures. Sucking the breasts by means of an India-rubber apparatus was employed, but with very little result, in three cases. It was never alone sufficient. The colpeurynter was employed in two cases, once after sucking had been tried; in the other case, after fourteen fruitless injections of aqua picea into the uterine cavity. The vaginal douche was employed in twelve cases; only twice did it alone succeed, and three times it was necessary to employ a sponge to dilate the os; in one case it induced hemorrhage. Sponge tents were employed in four cases, always after the vaginal douche had been tried. Active pains and dilatations of os set in in all cases not later than twenty-eight hours after its introduction. Warm water was injected into the uterus, between it and the membranes, in four cases. In the first two the results were satisfactory, but in the other two they were such as to lead the author not to employ this method further. He thinks it not impossible that hemorrhage may be produced by repeated injections after this method, and that air may possibly be introduced. In ten cases the means employed to induce labour was the introduction of a gum-elastic catheter into the uterus. In six of these cases the vaginal douche had been previously employed. In eight cases the interval which elapsed between the introduction of the catheter and the first pains was five minutes to twelve hours. In five of the cases, the pains not being satisfactory during this interval, a second, larger catheter was also introduced. The birth of the children took place in twelve to fifty-two hours; six were born alive; one mother died of metritis. Puncture of the membranes was employed in the two cases when hydramnios was present; both had a favourable result for the mother. The general result arrived at is that the best time for the operation is the thirty-fourth or thirty-fifth week, and that the best method consists in the use of the vaginal douche of warm water, this being followed by catheterization of the uterus.—*Sydenham Society's Year Book for 1862.*

40. *Anæsthetics in Midwifery.*—Dr. CHARLES KIDD read a paper on this subject before the Obstetrical Society of London (May 6, 1863). The administration of chloroform, he said, in various kinds of labour has been followed by the very best results; the feeling of hope of relief of pain to the mother continues to be most beneficial, the increasing number of living children now saved, where craniotomy previously was practised, is most encouraging for the future. The

present communication is a sequel to a former one in the *Transactions* of the Society, and the author said it was satisfactory to find that all the leading details of that memoir had been highly appreciated, and since then very fully recognized as to their truth by the chief practical obstetricians of Germany, France, America, Australia, etc., more particularly as to the extreme value of chloroform in cases of malpresentation, or contracted outlet of the pelvis requiring versional delivery; as also in some bad forms of anæmic and epileptic puerperal convulsions, chloroform in tedious exhausting labours after dilatation of the os in women of a "particular age" who marry late in life, etc. etc. The present communication in particular had reference—1. To cases attended with hemorrhage, where the author wished to suggest caution in the administration, as also to obtain the opinion of the Society if hemorrhage be encouraged by chloroform. 2. To direct attention to the serviceableness of chloroform in cases of retained placenta. 3. To the usefulness of alternating the administration of ether with that of chloroform where the pulse sinks, as in some exhausting operations, such as ovariectomy. 4. To the vast advantage of using chloroform in puerperal convulsions. 5. To direct attention to the greater safety of chloroform at present, as we now know the accidents do not occur so much or at all from heart disease as from simple apnœa, as the result of stoppage of the respiratory muscles, like the relaxation or paralysis of other muscles, and to direct the Profession to the extreme value of the "Faradisation" current of these muscles in such accidents, when other means fail to restore the patient. And, first, as to the tendency of chloroform to superinduce hemorrhage in ordinary cases, the author seemed to think the fear of this was not entirely without foundation: it is, perhaps, the only one vulnerable point in the administration, yet the latter can be stopped if hemorrhage is feared or the hemorrhage combated by ergot, stimulants, the use of cold, the "binder," pressure, etc., but according as bleeding continues, it is to be remembered the absorption or endosmosis of the chloroform is slightly increased, if it be still gone on with; though, on the whole, the author is not so much afraid of this condition with chloroform as one of brain congestion, or a state observed occasionally—viz., almost of delirium tremens—in some Hospital patients, or a state leading to the actual effusion in the brain in the worst form of puerperal convulsions; but this latter disease may occur without chloroform at all, and we must not blame chloroform. The author desired it to be known that he now took the most unfavourable as well as the more favourable side of the question, and as a "set off" to the doubtful question of danger of hemorrhage, he was certain that chloroform removed unnecessary and often exhausting pain (for pain, *per se*, is always an evil); it renders "versional" delivery very much more easy, it also undoubtedly facilitates the recovery of the lying-in patient; it lessens pain, which pain often leads to puerperal convulsions. It is not probable at all that chloroform skilfully used ever stops a labour or causes inertia. Dr. Tyler Smith saw one case—we see this stoppage, and inertia, and even many cases of death from syncope during, or immediately after labour, where chloroform was never thought of at all; nor does it cause inflammation. We must not argue from coincidences, or false statistics, or what the author terms it, the always venerable error in medical logic of arguing from a "post hoc" to a "propter hoc;" it is a great charity to give the women in childbirth chloroform; but it too often happens that statistics, old routine, and shallow incongruities, as in other kinds of medical evidence, stand in the way of what is of charity or the general good of the poor patient, or the professional character. The next division of the present paper had reference to the usefulness of chloroform in "hour-glass" contraction of the uterus, and some, if not all, cases of retained placenta. A safe and useful rule (having the approval of the large Dublin Lying-in Hospital and other institutions) is the following: If, in efforts at manual extraction of adherent placenta, the uterus be contracted firmly or in "hour-glass" fashion, the condition of the patient fair, and yet much resistance offered to the hand—but we are anxious to avoid uterine phlebitis—the administration of chloroform facilitates the placenta removal and changes the firm uterus contraction (as in version cases). It is, of course probable in many cases that there may be prostration or inertia; here ammonia must be given, and acts very well with chloroform or brandy. There

is a sort of lying-in room superstition, need it be said, that nothing is right till the placenta and every bit of a placenta is taken away. No doubt retained placenta is fortunately a rare complication in cases of delivery, yet in some 6000 deliveries, 56 of bad hemorrhage and 28 of retained placenta were noted, and one case was mentioned by the author where "portions" of a placenta were removed, and uterine phlebitis thus prevented, twelve hours after a delivery; the removal such as seemed impossible without chloroform. These cases are more common with first children than with post-primiparous births. Chloroform is at least one remedy not to be neglected when the other ordinary measures are under trial. Whether many of these cases depend on inertia, the reader will decide for himself; but a new and better school of obstetrics has arisen within the last dozen years, and since the introduction of anæsthetics, bleeding is not now the remedy for phlebitis or typhus; nor is chloroform so full of danger as supposed or shown by false statistics. The author here related his experience in the analogous depressing operation of ovariectomy, in about thirty of which cases he has assisted with the anæsthetic. He now prefers ether to chloroform, or, better still, to place the patient first fairly under the latter, and continue the anæsthesia with the former; it is not necessary to use very much of ether, but if the pulse should sink, the action of sulphuric ether is very marked in restoring it. If ovariectomy could be performed without one or the other, but with a piece of ice over the linea alba, it might be better still. The chief portions of the operation—breaking down adhesions where they exist, securing the pedicle, etc.—are not very painful, and even the tension of the tumour sometimes stretches the abdominal wall to a thin membrane, devoid of feeling. Chloroform, the author again intimates, should be never given in labour cases before the os uteri has dilated to something like the size of a shilling; before that the woman will bear her "pains" with some philosophy or satisfaction, if not resignation. The narcotism of chloroform is more marked in the early than in the later portion of the labour; but it is here that chloroform "delays a labour," as occasionally complained of. It is a great mistake to begin it too soon, however, no matter what the entreaties of friends, or attendants, or the patient herself may be. Very many of the popular prejudices against chloroform in these cases arise from catching a fact by the wrong handle, as it were, or losing sight of the "*Opiferque per orbem*" that we boast, the relief from pain in charity that it is our duty and privilege to afford the lying-in woman. Pain, too, is a physiological evil; the sense of pain is confined to the sensorium and sensory ganglia, in which chloroform acts so specially and almost alone. The effort of the uterus to empty itself, on the contrary, is one so little related to these that labour may go on in perfect paraplegia; as in cases where the relations of the spinal and reflex system were totally cut off from the sensorium and ganglia by acephalocysts in the upper portion of the chord. Labour, again, will proceed, though the cervical vertebræ may have been fractured in animals, or in the deep apoplectic coma of eclampsia in women, or in the dead insensibility of drunkenness, all of which explains that pain is non-essential, and that we may have spontaneous uterine or reflex action very perfect indeed, though sensation of pain through the brain be removed. At any rate, the sense of pain as pain, as the woman is aware of all about her, and even of the contractions or rhythm of the uterus, as she might without pain recognize the rhythmic contractions or beat of the heart. She watches, in fact, for the "pain," as she calls it; wonders and reflects that it has lost its agony, and yet the labour progresses as well as if she was in torture; recalling one's rude recollection of the old lines—

"Remembrance and reflection—how allied;  
What thin partitions sense and thought divide!"

Like the knights of old, and their contending opinions of the colour of opposite sides of the same shield, have been the contending opinions in journals and books as to whether chloroform is dangerous in labour, or delays labour, or leads to hemorrhage. But this diversity is at once explained as to delay—whether the chloroform was given too soon or not; and as to danger, by a heap of errors yet copied from one standard edition of a book into others, as to heart disease and its dangers, etc. Reference was next made to "Puerperal Convulsions,"

and three cases mentioned of fatal puerperal convulsions brought on apparently by the excessive reflex irritability of passing the hand into the uterus to remove adherent placenta. Both affections might have been prevented by use of chloroform, but could not fail to be aggravated by the lancet, still so much esteemed in convulsions. But the day for the lancet is gone by, as for stage coaches, or salivation in syphilis. Again, such convulsions are often the result of intense, long-continued agony, which nothing can lessen so well as skilful and small doses of chloroform. It is probable, as observed by Van der Kolk, that in these and all such cases of convulsions that direct irritation of peripheral ends of nerves (notably in some forms of fits from worms, irritation of external genitals in masturbation, etc.,) is reflected directly back to the medulla oblongata (or cerebellum (?) which probably presides over the organs of involuntary life), much like the impression of molecules of a galvanic telegraph wire, though still purely vital; this direct irritation, by a sort of induction, acting on other roots of nerves lying side by side. Hence we see that passing a hand into the uterus excites convulsions in parts not apparently connected with the uterus, but all which excess of action, as well pointed out by Dr. Tyler Smith, Dr. Murphy, and others, is controlled, for a time at least, by chloroform. We see this every month in tetanus cases also, and various forms of epilepsy as now so admirably cured by Dr. Brown-Séquard by other forms of anæsthesia. In conclusion, the author directed attention to seventeen women with obstructed labour, where the mothers had had in old times previously dead children, or eviscerated children, torn away by hook or crochet, or craniotomy, as related to the Society, but where, by means of version subsequently under chloroform, nine living children, and seven with heart pulsation (but which did not live), were gained for the overjoyed mothers, and the barbarous misery to patient and attendant of pulling the child in pieces or craniotomy saved. Cases of this kind now crowd on us from all parts of Europe, America, Australia. Such is one of the vast benefits of this still underrated and cruelly misrepresented agent, chloroform, which now, as we are aware of the exact nature of accidents, not from heart disease, as previously surmised, has come to be perfectly safe, as simple apnœa of chloroform (cardiac syncope of snow) is due to diminished action of the respiratory muscles and general reflex system, so readily excited by electricity when ordinary means (which is not often) fail to restore the patient.

41. *Apnœa Neonatorum*.—Dr. GEORGE GREAVES, in a paper in the *British Med. Journal* (July 5th and 12th, 1862), endeavours to reduce into a consistent theory the facts relating to the condition of the vital functions of the fœtus during labour, and of the new-born child in the interval which occurs between birth and the full establishment of respiration. This question has not, he contends, received the attention it deserves. The subject is commenced by a reference to the state of infants apparently stillborn. Of these there are three classes: 1. The surface of the child is pale, the body is motionless, the pulsation of the funis has entirely ceased, the beating of the heart can scarcely be felt; this is syncope. 2. The external phenomena are the same, but there is still some pulsation in the cord, though it is weak and slow; this is apnœa. 3. The pulsation of the cord is not necessarily slow, may be strong, the surface is rather blue than pale; the face and neck are livid and swollen; the eyes are often widely open. This is a partially apoplectic or comatose condition. The two first classes of cases are the same in kind, only differing in degree, and they depend on one cause, namely, the more or less prolonged interruption to intercommunication between the organisms of the mother and the fœtus; but in the third class of cases the condition is essentially different, there have been incomplete attempts at respiration, and the phenomena of congestive apoplexy are present. The consequences produced by interruption to the placental action on the fœtus are two, the fœtus is deprived of food and also of air. The effects of the deprivation of the latter only it is necessary to consider. This suspension of the breathing function of the placenta may be effected: 1. By the blood of the mother not being sufficiently arterialized. 2. By great loss of blood or other cause producing syncope in mother, whereby the quantity of blood sent

to the placenta is materially diminished. 3. By interruption to the circulation through the umbilical cord. This most frequently occurs during labour; but it may occur prior to this and from other causes: knotting of the cord, or knotting round a limb, or round the neck; extensive oedema of the cord; twisting of the cord on itself; these causes also may produce the effect alluded to. 4. There is a class of cases in which there is interruption to the breathing function of the placenta owing to contractions of the uterus during labour. This is intermittent in its action, and does not usually go beyond a lowering of the vital activity, and a weakening and retardation of the pulse of the fœtus while the cause is in operation. This class of cases the author wishes to direct special attention to. He states that it has been found by many observers that there is during labour a retardation of the fœtal pulse, and he substantiates this by reference to the works of Hamilton, Kennedy, Moir, and Sidey. The diminution of the frequency of the fœtal pulse during the pains of labour, to the extent of a third or even of one half, may, he presumes, be accepted as an ascertained fact. What is the cause of this retardation? "It will be at once admitted that it is a cause which, operating with more than ordinary force, must be the chief agent in producing still-birth." It has been the custom to ascribe the still-birth, when not manifestly dependent on immaturity or disease of the fœtus, to pressure of the uterus on the fœtus. It has been assumed that this pressure is exercised on the chest or head: it is difficult to conceive, however, how this can be the case. Compression of the placenta between the body of the child and the placenta has also been set down as a cause. This may be the case, but only as subsidiary to one which is, the author believes, the main agent in producing the effect in question, viz., the obstruction by the contraction of the uterine fibres of the flow of blood through the ultimate ramifications of the uterine blood-vessels, the "curling arteries." The temporary stoppage of the circulation in the vessels here alluded to has not been spoken of by any previous writer. The blood in the fœtal vessels cannot be duly aerated if the blood sent to the placenta be greatly diminished, and as a consequence of this it stagnates. The fœtal heart beats more and more weakly, and less frequently, and finally ceases unless the obstruction to the placental circulation be removed. The heart of the fœtus ceases to act from over-distension. In the early stage of labour the pains occur with long intervals, there is consequently ample time for the placenta to recover itself; if the labour be very rapid, and intervals of rest be not afforded, the child is born apparently or really inanimate. In a more advanced stage of labour, when the liquor amnii is discharged another cause comes into operation, the placenta becomes actually partly detached, and the connection between the placenta and the uterine arteries is in places permanently broken; in cases of placenta prævia this event occurs at the commencement of labour and in a large proportion of such cases the child is stillborn. The cause now pointed out by the author is in operation in every labour. To the possible objection to the position here taken up, that the circulation in the cord cannot be suspended, inasmuch as the cord still continues to pulsate, the author answers that pulsation is not necessarily a sign of the passage of blood; the cord pulsates after it has been tied between the ligature and the heart. Compression of the placenta generally, may intensify the action here alluded to, but in a secondary manner. After labour has begun, the funis may be compressed and extended from well known causes. The action of the uterus may be thereby intensified, and the uterine arteries more and more compressed as above described. Compression of the head has possibly its share in producing still-birth in tedious labour from contracted pelvis, but this cannot be the case in still-birth with unusually rapid labour. A further effect of stoppage of placental circulation is that the entry of blood from the placenta to the fœtus is prevented, and what arrives is impure and devoid of vitalizing properties. When the apoplectic form of still-birth is present, the phenomena are different; the pulmonary organs have been partially expanded, the pressure on the column of blood in the ductus arteriosus has been relieved to a certain extent, while the foramen ovale has become partially closed. On this respiration process being interrupted, however, the right heart becomes congested, hence the lividity, swollen features, &c. The alleged effects of *secale cornutum* are explained by

what has been here related of the effects of rapid labour. It is fatal to the child when it gives rise to permanent unresting uterine contractions, unless we admit, at least, the directly poisonous influence of the drug on the fœtus.

The practical conclusions drawn are: It is perfectly useless to delay tying the cord after the expulsion of the child; more, it is injurious by interfering with efforts at resuscitation. In attempts to resuscitate a still-born child, the first thing which should be done is to allow of the escape of a minute quantity of blood from the cord, thus to relieve that distension of the heart which prevents its action. If after a pause of two or three minutes the child does not breathe, and is not really and manifestly asthenic from prematurity, disease, &c., the cord should be divided, and one to three drachms of blood allowed to escape. In apoplectic cases the quantity removed may be greater. The next step is to induce respiration. The warm bath is, the author believes, injurious; dashing cold water on the chest, slapping the back or nates with the hand, circular friction on the epigastrium with the tips of the fingers are all useful. These rarely fail if the heart still beats. The direct inflation of the chest with air is preferred to the "ready method" should the above measures fail.—*Sydenham Society's Year Book* for 1862.

42. *Simultaneous Uterine and Extra-Uterine Gestation Proceeding to the full Term of Gestation*.—Mr. L. R. COOKE read before the Obstetrical Society of London, June 3, 1863) the following account of a case of this.

E. R—, aged thirty-nine years, who had had three previous natural deliveries, was taken in labour on December 8th, 1862. She had suffered no very unusual amount of inconvenience during her pregnancy beyond dragging pains, and an unusual sense of weight in the abdomen. On external examination, the abdominal swelling was found to differ from its normal characteristics, in having its greatest prominence considerably to the left side, and about on a level with the umbilicus; the whole tumour being also more circumscribed, well defined, and spherical in form than usual. The limbs of a fœtus were distinctly traceable through the abdominal walls, and a placental souffle was audible over a large portion of the tumour. A vaginal examination showed the canal much elongated, its rugæ obliterated, and the os uteri drawn up beyond reach of the fingers. Suspecting therefore an abnormal gestation, Mr. Cooke requested Mr. Spencer Wells to see the patient with him, and he attended with Dr. Kuman, of Vienna. It was thought there were two sets of fœtal heart sounds, while the extensive surface over which the placental bruit was heard gave a suspicion of two placentæ. Whether the fœtuses were both intra-uterine, or an ovarian tumour present also, was uncertain. At this time the pains were so slight and at such long intervals, that the patient was left, the bladder having been emptied, and a grain of opium administered, instructions being given to send for Mr. Cooke on the occurrence of expulsive pains or of any change in the patient.

She passed a good night, and the uterine pains had been gradually re-established during the next day. At six o'clock P. M. Mr. Cooke was sent for, and found her in strong labour. Making an immediate examination, the sacral concavity was now found occupied by a firm, resisting, rounded tumour, presenting no trace of fluctuation, and immovable under a very considerable degree of force employed between the pains. Its presence reduced the outer posterior dimension of the inlet to less than two fingers' breadth, through which no os uteri was discoverable; but resting on and anterior to the symphysis pubis, a small portion of the convex cranial surface of a fœtus was to be felt.

Dr. Greenhalgh and Mr. Meates, of Chester-square, saw the patient. The diagnosis was still a matter of doubt, because the tumour was not traceable abdominally, the uterus being in front more or less; and examined per vaginam, it might equally have been taken for a solid tumour or a pedunculated fibrous outgrowth from the uterus.

The obvious indication was to deliver the woman as speedily as possible, as the severity and frequency of the pain threatened rapid exhaustion of her strength, if not rupture of the uterus. Perforation of the head of the fœtus was considered inadmissible from the almost impossibility of getting at it and

fixing it, and because also, even supposing it accomplished, evisceration and dismemberment under the same difficulties would have been equally necessary.

It was decided therefore to put the patient under chloroform, so as to suspend the action of the abdominal muscles, in order to endeavour to displace the tumour and turn the child; and failing that, to perform Cæsarean section. This being done, the tumour was pushed out of the vagina with some difficulty, and delivery completed by version. The placenta being removed, and the uterus not contracting satisfactorily, the woman moreover being much exhausted, it was thought advisable to avoid any manipulation of the abdomen with a view to discover the nature of the remaining tumour. She never entirely rallied from the shock and exhaustion from the operation, and died within forty-eight hours.

The autopsy was made four hours after death, Dr. Greenhalgh, Dr. Kuman, Mr. Spencer Wells, Mr. Meates, Mr. Colborne, and Mr. R. L. Cooke being present. On opening the abdomen and reflecting the walls, the first thing revealed was the body of a full-grown female fœtus contained in its proper membranes, which was unruptured, and distended with liquor amnii. The anterior or external surface of the chorion was perfectly smooth, and in immediate relation with the abdominal peritoneum. Beneath the tumour the uterus was seen, partially contracted and unruptured. There was a large quantity of greenish-brown, grumous fluid in the peritoneal cavity. On opening the fœtal membranes and removing the fœtus, it was found that the placenta was situated in, and firmly attached to, a shallow capsule, formed of the expanded and enlarged fimbriæ of the right Fallopian tube, which on its convex or peritoneal aspect was firmly tied down by numerous and very tough bands of old adhesion. A stylet could be passed along the tube to its expanded extremity, when it became arrested by the placenta.

The author remarked, that the lessons derivable from this case appear to be mainly—

1. That in cases of doubtful tumours complicating parturition, it may be well to discover, as far as may be, whether there is any evidence of an extra-uterine fœtation as soon as possible after uterine delivery.

2. Whether, in case of such a discovery, the probability is or is not that the adhesions of the tumours may be so firm and numerous as to render gastro-tomy inadmissible.

3. Whether, supposing the existence of such adhesions to be admitted, it is advisable or justifiable to remove the fœtus alone with the certainty of a portion of the liquor amnii escaping into the peritoneal cavity, and with the possibility of the placenta becoming encysted and being thrown off at a future period.

Dr. GREENHALGH remarked that the case so ably narrated by Mr. Cooke was most interesting in a diagnostic and practical point of view, and he believed was without parallel in the annals of obstetric medicine. He drew attention to the remarkable absence of abnormal symptoms during pregnancy, to the extreme anteversion of the womb, and to the influence of the labour pains in forcing the extra-uterine fœtus from its position in the abdomen into the pelvis, and so occasioning an obstacle to the passage of the intra-uterine fœtus.—*Lancet*, July 11, 1863.

43. *Extra-Uterine Pregnancy—Delivery per Anum.*—Dr. MATTHEWS DUNCAN exhibited to the Medico-Chirurgical Society of Edinburgh a fœtus apparently nearly fully developed, but in an advanced stage of a peculiar decomposition, which he had delivered per anum as a breach presentation. He was indebted to Dr. Sanders for this interesting case, the woman having been transferred to his care by Dr. Sanders, under whom she was originally placed in the Royal Infirmary. The case was, in every respect, one of very great clinical interest. Dr. D. would here only observe, that although the operation appeared very formidable, and the woman appeared to be in a state of very great exhaustion and danger, yet two days after the removal of the child she wished to be allowed to leave her bed and go to the fireside, and had made a rapid recovery without a bad symptom. After the birth of the child, Dr. D. passed his hand and arm per anum into the cyst, to examine it and remove its contents. In two

days after this great distension of the anus, it had so far recovered its function, that the woman, though affected with diarrhœa, no longer soiled her bed, and after other four days the sphincter acted quite as efficiently as before the operation, gently grasping the finger passed through it.—*Edinb. Med. Journ.*, July, 1863.

## MEDICAL JURISPRUDENCE AND TOXICOLOGY.

44. *Poisoning by Phosphorus*.—In the Clinical Report of the Hospital of Hamburg, for 1861, by Dr C. TUNGEE, there is a history of nineteen cases of phosphorus poisoning. In all these cases the poison was taken intentionally, for the purpose of suicide, by persons who were suffering from mental distress.

Amongst the symptoms observed in these cases, the reporter remarks that there were presented few of those usually ascribed to the effects of phosphorus. The appearances of gastro-enteritis which are commonly assumed to follow large doses were not offered, nor was there shown any indication of those signs of nervous excitement which are assumed to follow upon the administration of small doses of the poison. The first symptoms occurred a few hours after the administration, and were usually excited by the absorption of foods taken into the stomach, especially fluid foods, such as milk. The first symptoms were vomiting, pain in the stomach, and burning, but the indications of the irritation of the mucous membrane of the stomach were rarely intense, and there was seldom any action of the bowels, but more frequently constipation. In several cases, during slow recovery, jaundice was presented, which in a few days also passed away. Together with the external sign of the jaundice, there were indications of fulness in the stomach, deficient appetite, faintness, and vomiting of bile, and in severe cases præcordial pain, giddiness, noises in the ears, throbbings in the head, sleeplessness, black vomit, and evacuations from the bowels containing blood. The pulse and the animal temperature showed very little deviation. The voice, in nearly every case, was low, but this sign the writer properly considers was rather attributable to the mental condition of the sufferer than to the physical. In some instances, the patients gave evidence of delirium and coma; in others, where the cases ended fatally, there was consciousness up to the period of death. In the latter examples, the præcordial pain was most marked, and there were signs of cerebral anæmia. The action of the kidneys was irregular and difficult, the urine was acid, and rarely albuminous.

It was impossible to determine the quantity of phosphorus taken in every case, but one man took from two to three grains in an electuary, and another half a scruple in honey. The active effects of the poison seem to have been greatly increased when it was swallowed in fluids, especially in warm water and milk.

Of the nineteen cases of poisoning fourteen recovered; in the five that died, the following were the leading morbid presentations. The general fact was that the morbid signs were those of jaundice in an intense form; the liver was increased in size, free from blood, and indicated marked fatty change. The kidneys were degenerated, and their epithelial structure was destroyed; ecchymoses were observed, and the blood was fluid, as in icterus and in yellow fever; there was also molecular destruction of the muscular fibres of the heart.

In regard to treatment, emetics were found to be the most useful antidotes; and the fear of exciting gastro-enteritis, either by the use of emetics or purgatives, proved groundless. After free emesis, a purgative was valuable, but castor oil, and all oils had to be avoided, owing to the solubility of the phosphorus in them. Dr. Tünger believes from his observations, that phosphorus does not readily oxidize in the stomach, and in none of his cases was there any indication of recent inflammation of the lining membrane. In the first stages of poisoning, calcined magnesia was useful. The paper noticed is most valuable. Its teachings extend beyond the simple question of poisoning by felonious or suicidal intent, into various questions connected with general pathology and natural disease.—*B. and F. Med.-Chir. Rev.*, April, 1863.